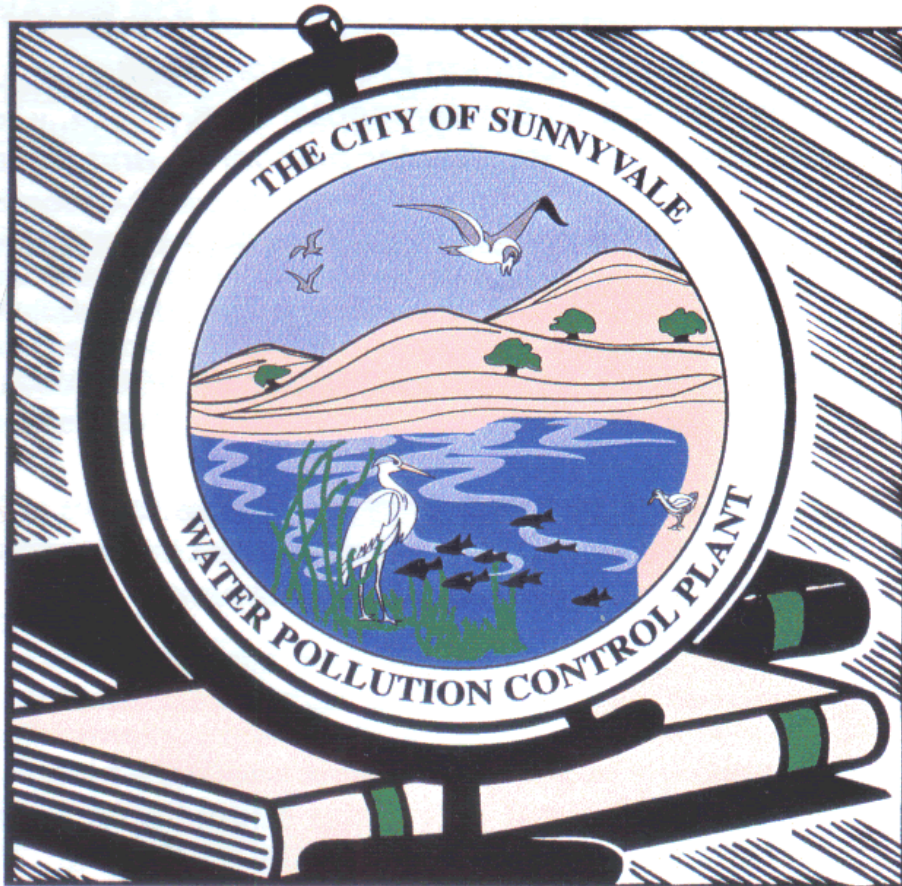


**City of Sunnyvale Water Pollution Control Plant
Environmental Outreach
Schools and Youth Program**



**Environmental
Education**

Book and Video Summaries

The Environmental Outreach Program

promotes and supports environmental outreach to the Sunnyvale community, business/industry, schools/youth and south bay area region.

Program staff participate in a variety of activities including National Pollution Prevention Week, company and school environmental fairs, regional annual events, theater billboards, and more.

The Speakers' Bureau provides on-site presentations to diverse organizations.

Tours of the water pollution control plant are given year-round by appointment.

The program offers a variety of resources for K-12 educators, continuing education instructors, scouting/youth group leaders, and summer camp counselors.

If you would like assistance in determining which activities would best fit your water education program, or have further inquiries, please **CONTACT** us at:

City of Sunnyvale
Water Pollution Control Plant
Environmental Outreach Program
1444 Borregas Ave. / P.O. Box 3707
Sunnyvale, CA 94088-3707
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FAX: 408-747-1139
E-MAIL: gglen@ci.sunnyvale.ca.us



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Book Synopsis

WATER POLLUTION

Handle with Care: Your Guide to Preventing Water Pollution - The Terrene Institute, 1991

Grades 6-12 and above

Explains how everyday activities contribute to water pollution and gives information on how to reduce the impact. Activities include septic tank maintenance, use of household chemicals and pesticides and their disposal, car washing, and gardening. Gives information about organizations involved in water conservation.

The Berenstain Bears Don't Pollute (Anymore) - Stan and Jan Berenstain, 1991

Grades 1-6

Tells a story about a family of bears whose young ones learn about pollution and start a club to prevent it. Discusses pollutants in daily life and gives examples like oil leaking into a stream killing fish and fish getting tangled in plastic holders for soda cans. Introduces students to ecology, conservation and recycling, pollution prevention, and forest conservation.

WATER CONSERVATION

Conserve Water Educator's Guide: Water Conservation Activities and Case Studies - The Water Course, 2000

Grades 6-12

Presents a set of activities and case studies related to water conservation. Activities include identifying plants and animals and their water conservation behavior, understanding ground water, irrigation, water audits, water conservation ideas, water rights, xeriscape, etc.

WATER EDUCATION

A Drop Around the World - Barbara McKinney, 1998

Grades K-6

Presents the water cycle in verse form. Uses a single drop of rain as the central character of the story, tracing its journey throughout the globe. Introduces the reader to different parts of the world. Presents concepts like condensation, vaporization, states of matter, water purification, and gravity in a simple form.

A Teacher's Guide to a Drop Around the World - Bruce and Carol Malnor, 1998

Grades K-6

Lesson plans based on the story book can be used as a tool for presenting science, world habitats, and life skills to students. Twenty-two lessons are included with experiments and group activities.

WATER HISTORY

Water and the Shaping of California - Sue McClurg, 2000

Grades 9-12 and above

Discusses the engineering feats, political decisions and popular opinion that reshaped the nature of water resources in the state. Includes several photographs and articles by well-known authors.

WATER ACTIVITIES

Thematic Water Unit - David Jefferies, 1993

Grades 2-6

Bases various learning activities related to water on the three books: Island Boy, Three Days on a River in a Red Canoe, and The Magic School Bus at the Water Works. Presents information on the water cycle, oil spills and clean up, water filtration, and water conservation. Activities cover monitoring water use at home and using less water, and writing to the water department.

Water Magic - Mary Habberman, 1991

Grades K-3

Designed for use with AWWA's student workbook, Splash, or as a stand-alone curriculum tool. Activities are designed to understand the importance of water, states of matter, water pollution, water distribution network, sewage treatment and water conservation.

Environmental Sciences Activities Kit - Michael L. Roa, 1993

Grades 7-12

Organized into six units covering land use, water, wildlife, energy, atmospheric issues and human issues. The unit on water issues includes information and activities for understanding oil spills, water treatment, and water conservation.

Water Can Be Fun! How to Create a Successful Science Fair - AWWA, 1991

Grades 1-6

Shows how to create a science fair for elementary school students. Includes templates for letters, forms, time sheets, and flyers. Designs experiments to help students understand the various physical laws governing the behavior of water, such as evaporation, buoyancy, displacement, water pressure, gravity, and surface tension.

The No Waste Anthology: A Teacher's Guide to Environmental Activities K-12 - Department of Toxic Substance Control, Public Education & Information

Grades K-12

Describes environmental activities for classroom lessons in three parts – Natural Resources and Pollution, Solid Waste, and Hazardous Waste. Activities are for various ages and are designed to understand concepts like ecology, acid rain, recycling, water cycle, household hazardous materials.

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**Kids and Creeks: An Interdisciplinary Creek
Exploration Program - Aquatic Outreach Institute, 1999**

Grades 6-12

Presents instructions designed to increase young people's awareness of the San Francisco Bay and local creeks. Gives an historical perspective of urban impact on the Bay area. Contains illustrated information on wildlife in the area. Includes activities such as planning outdoor watershed protection activities, conducting creek cleanups, volunteering, and stenciling storm drains. Lists useful web sites and books.

MARINE ISSUES

Wonders of the Sea - Louis Sabin, 1982

Grades K-3

Introduces various types of marine plants and animals and their interaction with each other through the food chain. Briefly describes their habitat and their means of locomotion like swimming and "walking on the ocean floor."

WETLANDS FIELD TRIP GUIDE

**Salt Marsh Manual: An Educator's Guide for the Wetland
Roundup Field Trip - Don Edwards San Francisco Bay
National Wildlife Refuge, Environmental Education Center,
1996**

Grades K-6

Covers San Francisco Bay habitats, endangered species, and migratory birds. Gives an overview of the San Francisco Bay ecosystem, refuge history, habitats, and wildlife. Includes planning, preparation, pre-visit and post-visit classroom activities, and hands-on field trip activities for the Wetlands Roundup field trip program.

ENVIRONMENTAL GENERAL

Nature in Danger - Sally Morgan & Rosie Marlow, 1995

Grades 1-8

Presents information on habitats in danger, including woodlands, forests, water bodies, and wildlife. Discusses bio-indicators for

pollution, and tips on conservation. Includes simple experiments for understanding concepts like oxygen production by plants, damage to aquatic life by oil spills, and organic farming.

What It's Worth to Save the Earth - Betsy McAllister, Sundra B. Pitts, Margaret Finney, Kelley L. Graves, 1994

Grades 4-8

Describes activities to help students understand local, national, and global environmental problems. Examples are: creating a school-wide recycling program, reading about habitats, and earth day contests.

Teaching Children About Life and Earth Sciences - Elaine Levenson, 1994

Grades 4-12

Covers topics such as identifying and classifying animals and seed-bearing plants, ecology, weather, geology, and geography. Experiments are designed to understand these topics. The topic on weather includes information on the water cycle.

Usborne Science & Experiments: Ecology - Richard Spurgeon, 1988

Grades 1-8

Explains basic terms and ideas of ecology using examples from different ecological regions of the world. Gives information on habitats, soil types, elemental cycles, pollution, forest types, and population. Discusses urbanization, evolution, and ecology projects. Lists addresses of leading conservation and environmental groups.

WATER STORIES

Spring Waters, Gathering Places - Sandra Chisholm DeYonge, 2000

Grades 3-6

Explains that early people thought springs were a gift from the earth. Uses illustrated stories and myths to chronicle the use of spring waters through time. Games and investigations lead readers to an understanding of ground water, springs, and the importance of healthy water for healthy people everywhere.

Video Synopsis

WATER CONSERVATION & POLLUTION PREVENTION

3-2-1 Contact: Down the Drain - 1991, 30:00 min

Grades 3-6

Presented by a teen reporter in a clear and concise manner, this video stresses the need for water conservation and pollution prevention. It describes the uses, importance, and properties of water and explains how humans disturb the water cycle by tapping into it and causing pollution. It also includes an overview of the processes involved in a sewage treatment plant, an aerial water sampling exercise conducted by the EPA, and tips on wise water use.

It's Wet, It's Wild, It's Water - 1995, 15:00 min

Grades 7-12

Features teenagers reporting from the Sacramento-San Joaquin River Delta about the need for water conservation. The video also talks about watershed protection, water conservation within our homes, and ways of preventing pollution of storm drains. There is also a segment on the importance and functioning of a sewage treatment plant.

Water in an Endless Loop - 23:00 min

Grades 9-12 and above

Explains the cyclical nature of water and the need for water conservation and recycling. Discusses the water cycle, water pollution and its causes, water treatment plants, and water recycling.

Saving Water: The Conservation Video - 1989, 8:00 min

Grades 3-9

Shows a young boy traveling into the future and discovering water being displayed in a museum as a "lost treasure" of the

earth. Presents the importance of water and the impact of population growth and urbanization on our water resources. Gives tips on water conservation.

URBAN RUNOFF

Pointless Pollution: America's Water Crisis - 1989,
28:00 min

Grades 6-12 and above

Explains the impact of non-point source pollution. Presents case studies on four regions impacted by runoff including the cause of the environmental problem, its effect, and the steps being taken to prevent further harm.

Ground Water Adventure - 9:00 min

Grades 3-6

Presents a young girl playing a computer game about protecting the ground water from various pollution threats. The video discusses industrial, agricultural, and individual (households) sources of pollution and ways to eliminate them.

WILDLIFE HABITAT AND ENVIRONMENT GENERAL

Kids by the Bay - 19:00 min

Grades 3-9

Follows children on an environmental field trip in the San Francisco Bay Area. They take part in activities like island restoration through soil replenishment, marsh cleanup, non-native plant removal and replanting with native plants, treating rescued wild birds, and storm drain stenciling.

WASTEWATER TREATMENT

The Wastewater Treatment - 1987, 11:30 min

Grades 7-12

Explains the need for treating sewage by presenting the entire process of a treatment plant from primary to effluent and sludge

disposal. Discusses the technical expertise needed to operate a treatment plant.

CALIFORNIA WATER ISSUES

California Ground Water and the California Ground Water Model - 20:00 min

Grades 7-12

Demonstrates the working and assembling of the California Ground Water Model. This laboratory scale model is used to understand and visualize the concept of ground water movement in the earth, i.e., how water moves from the sea, rivers, or mountains into aquifers. It demonstrates the negative impacts of uncontrolled ground water use such as overdrafting and contamination of aquifers. Discusses recharging of aquifers.

The California Water Story - 9:00 min

Grades 3-12

Traces California water sources development. Gives history of water use in early settlements by Native Americans and Spanish missionaries. Shows the building of reservoirs and changing the course of streams during the gold rush. Covers the construction of levies and dams and their negative impact on wetlands and marine life. Stresses the need for water conservation.

WATER EDUCATION

My First Green Video - 1993, 40:00 min

Grades K-3

This is a collection of twelve easy-to-perform ecological experiments to help students understand concepts like acid rain, air pollution, water pollution and its impact, water purification, biodegradable and non-biodegradable substances, and natural resource conservation.

TO ORDER:

Listed below are the titles of all books and videos available for check out for a two-week period. When you place your order, please give us the title of your selection as well as your name, organization and a daytime contact number or e-mail address. We will call or e-mail you to confirm when your order may be picked up at the front desk of the Water Pollution Control Plant.

BOOKS:

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